# Forestland Interpretations

Forestland interpretations are important to good management. The management of trees begins with an understanding of the soil where they grow or are to be grown. Some soils are very suitable for growing wood crops; others barely support tree cover. Different tree species may vary in production on the same soil.

Forestland interpretations should be used to assist land users in planning, installing, and maintaining forestland management systems.

## Forest Management and Productivity

The Forestland Management and Productivity tables presents information about suitable for producing timber for each soil map unit. Management concerns, which include hand planting, mechanical planting, use of harvesting equipment, mechanical site preparation (surface), roads (natural surface), erosion on roads and trails, off-road/trail erosion, soil rutting, log landings, seedling survival, are listed by ratings of:

- Not Limited (0.00)
- Slightly Limited (0.01 to 0.30)
- Moderately Limited (0.31 to 0.60)
- Limited (0.61 to 0.99)
- Very Limited (1.00)

Information on potential productivity includes plant competition, common trees, site index, productivity class, and trees to plant.

### Management Concerns

**PLANT COMPETITION** - A rating of slight indicates little or no competition from other plants; moderate indicates that plant competition is expected to hinder the development of the fully stocked stand of desirable trees; and severe means that plant competition is expected to prevent the establishment of a desirable stand unless the site is intensively prepared, weeded, or otherwise managed for the control of undesirable plants.

**POTENTIAL PRODUCTIVITY -** This is discussed under the ordination class symbol.

**COMMON TREES** - Trees that generally occur on the soil are listed regardless of economic importance.

**SITE INDEX AND PRODUCTIVITY CLASS** - These are discussed under ordination class symbol.

**TREES TO PLANT** - Trees that are suitable for commercial wood production and that are adapted to the soil.

**HAND PLANTING** – ratings are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, a water table, and ponding. Ratings indicate the expected difficulty of hand planting, which includes the proper placement of root systems of tree seedlings to a depth of up to 12 inches, using standard hand planting tools. It is assumed that necessary site preparation is completed before seedlings are planted.

**MECHANICAL PLANTING** – ratings are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, a water table, and ponding. Ratings indicate the expected difficulty using a mechanical planter, which includes proper placement of root systems of tree seedlings to a depth up to 12 inches. It is assumed that necessary site preparation is completed before seedlings are planted.

**USE OF HARVEST EQUIPMENT** – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, and ponding. Ratings indicate the suitability for operating harvest equipment for off –road transport or harvest of logs and/or wood products by ground-based wheeled or tracked equipment.

**MECHANICAL SITE PREPARATION (SURFACE)** – ratings are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, a water table, and ponding. The part of the soil from the surface to a depth of about 12 inches is considered in the ratings. Ratings indicate the suitability of using surface-altering soil tillage equipment to prepare the site for planting or seeding.

**ROADS (NATURAL SURFACE)** – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads on which trucks transport logs and other wood products from the site.

**EROSION** (**ROAD/TRAIL**) – ratings are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails.

**EROSION (OFF-ROAD/OFF-TRAIL)** – ratings are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

**SOIL RUTTING** – ratings are based on a water table, rock fragments on or below the surface, surface texture, depth to a restrictive layer, and slope. Ratings indicate the hazard or risk of ruts in the uppermost soil surface layers by operation of forest equipment. Soil displacement and puddling (soil deformation and compaction) may occur simultaneously with rutting.

**LOG LANDINGS** – ratings are based on slope, rock fragments on the surface, plasticity index, content of sand, surface texture, a water table, ponding, flooding, and the hazard of soil slippage. Ratings indicate the suitability of the soil at the forest site to serve as a log landing and allows the efficient and effective use of equipment for the temporary storage and handling of logs.

**SEEDLING SURVIVAL** – ratings are based on flooding, ponding, a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. Ratings indicate the impact of soil, physiographic, and climatic conditions on the survivability of newly established tree seedlings.

See the National Forestry Manual, Subpart B for criteria used in rating management concerns.

This subsection includes:

• (a) Forest Management (one or two tables)

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti   	ng	  Use of harvesting equ   	ipment	  Mechanical site prepa   (surface)	ration	   Roads (natural surf   	ace)
	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
03: Aholt	Limited  ~stickiness (surface)  (limited)  ~seasonal wetness  (moderately limited)	  0.60	Limited  -stickiness (surface)   (limited)  -seasonal wetness   (moderately limited)		  Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (limited)  ~low strength   (moderately limited)	        0.91    0.75    0.50	Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (limited)	0.91	Limited seasonal wetness ((limited)stickiness (surface) ((limited)flooding ((moderately limited)	0.60
04: Booker	Limited  -stickiness (surface)   (limited)  -seasonal wetness   (moderately limited)	  0.60	  Limited  ~stickiness (surface)   (limited)  ~seasonal wetness   (moderately limited) 	  0.60	  Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (limited)  ~low strength   (moderately limited)		  Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (limited)	  0.76    0.75 	Limited  -seasonal wetness (limited) -stickiness (surface) (limited) -flooding (moderately limited)	0.60
05D2: Bluelick	Not limited	         	  Moderately limited  ~slope   (moderately limited)		  Moderately limited  ~low strength   (moderately limited)	0.50	Not limited		Limited  -slope   (limited)  -low strength   (moderately limited)	0.76
05E: Bluelick	- Slightly limited  ~slope   (slightly limited)	    0.04   	  Limited  ~slope   (limited) 	    0.68   	  Moderately limited  ~low strength   (moderately limited)  ~slope   (slightly limited)	  0.50    0.15	  Slightly limited  ~slope   (slightly limited)	    0.15   	  very limited  ~slope   (very limited)  ~low strength   (moderately limited)	1.00
07D2: Newcomer	  - Not limited	       	  Moderately limited  ~slope   (moderately limited)		  Moderately limited  ~low strength   (moderately limited)	0.50	Not limited		  Limited  ~slope   (limited)  ~low strength   (moderately limited)	0.76

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti 	ng	  Use of harvesting equ   	ipment	  Mechanical site prepa   (surface)	aration	   Roads (natural surf   	ace)
	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value
07F: Newcomer	  - Slightly limited  ~slope   (slightly limited)	0.04	  Limited  ~slope   (limited) 	      0.68   	  Moderately limited  ~low strength   (moderately limited)  ~slope   (slightly limited)	        0.50    0.15	  Slightly limited  ~slope   (slightly limited)	0.15	  very limited  ~slope   (very limited)  ~low strength   (moderately limited)	      1.00    0.50
09: Bremer	   Not limited		  Not limited     	           	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50    0.29 	Slightly limited  ~seasonal wetness   (slightly limited)	0.29	   Moderately limited   ~flooding   (moderately limited)   ~low strength   (moderately limited)   ~seasonal wetness   (slightly limited)	  0.60    0.50    0.29
10A: Dameron	- Not limited	           	  Not limited   		  Moderately limited  ~low strength   (moderately limited)	    0.50   	  Not limited 		  Moderately limited  ~flooding   (moderately limited)  ~low strength   (moderately limited)	0.50
11: Vesser	  - Moderately limited  ~seasonal wetness   (moderately limited)	  0.60     	  Moderately limited  ~seasonal wetness   (moderately limited) 	1	  Limited  ~seasonal wetness   (limited)  ~low strength   (moderately limited)	0.91	  Limited  ~seasonal wetness   (limited) 	0.91	  Limited  ~seasonal wetness  (limited)  ~flooding  (moderately limited)  ~low strength  (moderately limited)	0.50

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti 	ng	Use of harvesting equ	ipment	Mechanical site prepa   (surface)	ration	Roads (natural surf	ace)
	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value
12: Colo	Moderately limited  ~seasonal wetness   (moderately limited)  ~stickiness (surface)   (moderately limited)		   Moderately limited   ~seasonal wetness   (moderately limited)   ~stickiness (surface)   (moderately limited)	    0.60    0.50 	  Limited  ~seasonal wetness   (limited)  ~low strength   (moderately limited)  ~stickiness (surface)   (moderately limited)	      0.91    0.50    0.50	  Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (moderately limited)	0.91	Limited  -seasonal wetness (limited) -flooding (moderately limited) -low strength (moderately limited)	0.50
13: Grable	  Not limited 	       	  Not limited 	       	  Moderately limited  ~low strength   (moderately limited)	      0.50 	  Not limited 	       	  Moderately limited  ~low strength   (moderately limited)	0.50
14: Darwin	  Limited  ~stickiness (surface)   (limited) 	    0.75       	  Limited  ~stickiness (surface)   (limited)   	  0.75         	  Limited  ~stickiness (surface)   (limited)  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.75    0.50    0.29	  Limited  ~stickiness (surface)   (limited)  ~seasonal wetness   (slightly limited) 	  0.75    0.29 	Limited  ~stickiness (surface)  (limited)  ~low strength  (moderately limited)  ~seasonal wetness  (slightly limited)	0.50
15: Dockery	  Not limited 		  Not limited       		  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	0.50	  Slightly limited  ~seasonal wetness   (slightly limited) 	0.20	   Very limited   ~flooding   (very limited)   ~low strength   (moderately limited)   ~seasonal wetness   (slightly limited)	  1.00    0.50    0.20
18F: Moko	  Limited  ~large stones   (limited)  ~slope   (slightly limited)	    0.76    0.16	  Very limited  ~large stones >35%   (very limited)  ~slope   (very limited)	    1.00    1.00	  Limited  ~slope   (limited) 	      0.68   	  Limited  ~large stones   (limited)  ~slope   (limited)	    0.76    0.68	  Very limited  ~slope   (very limited)  ~slippage potential   (moderately limited)	  1.00    0.50

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti 	ng	  Use of harvesting equ 	ipment	  Mechanical site prepa   (surface)	ration	   Roads (natural surf 	ace)
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
18F: (cont) Rock outcrop	    Not rated 		    Not rated 		    Not rated 		    Not rated 		    Not rated 	
	  Slightly limited  ~slope   (slightly limited)  ~small stones   (slightly limited)	      0.20    0.17	  Very limited  ~slope   (very limited)  ~small stones   (slightly limited)	ĺ	Limited  -slope   (limited)  -low strength   (moderately limited)	      0.79    0.50	  Limited  ~slope   (limited) 	      0.79     	  Very limited  ~slope   (very limited)  ~low strength   (moderately limited)	    1.00    0.50
22C2: Greenton	  Not limited 		  Slightly limited  ~slope   (slightly limited) 	    0.20     	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50    0.25	  Slightly limited  ~seasonal wetness   (slightly limited) 	0.25	   Moderately limited   ~low strength   (moderately limited)   ~seasonal wetness   (slightly limited)   ~slope   (slightly limited)	  0.50    0.25    0.15
24: Haynie	  Not limited 		  Not limited 	       	  Moderately limited  ~low strength   (moderately limited)	    0.50 	  Not limited   		  Moderately limited  ~low strength   (moderately limited)	0.50
26: Haynie	  Not limited 		  Not limited   	       	  Moderately limited  ~low strength   (moderately limited) 	    0.50   	  Not limited   		  Moderately limited  ~flooding   (moderately limited)  ~low strength   (moderately limited)	0.50

#### Forest Management

Map symbol and soil name	   Hand planting		   Mechanical planti 	ng	  Use of harvesting equ 	ipment	  Mechanical site prepa   (surface)	ration	   Roads (natural surf 	ace)
	Rating class and   limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value
26: (cont) Waldron	  Limited  ~stickiness (surface)    (limited)	0.75	  Limited  ~stickiness (surface)   (limited) 		  Limited  ~stickiness (surface)   (limited)  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	0.75	  Limited  ~stickiness (surface)   (limited)  ~seasonal wetness   (slightly limited)	0.75	Limited  -stickiness (surface)  (limited)  -flooding  (moderately limited)  -low strength  (moderately limited)	0.75
30B: Higginsville	Not limited		  Not limited   	         	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50    0.15	  Slightly limited  ~seasonal wetness   (slightly limited)	    0.15   	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50    0.15
30C2: Higginsville	Not limited		  Slightly limited  ~slope   (slightly limited) 	    0.20     	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50    0.15 	  Slightly limited  ~seasonal wetness   (slightly limited) 	    0.15     	   Moderately limited   ~low strength   (moderately limited)   ~slope   (slightly limited)   ~seasonal wetness   (slightly limited)	  0.50    0.15    0.15
33C: Knox	Not limited		  Slightly limited  ~slope   (slightly limited)	    0.10 	  Moderately limited  ~low strength   (moderately limited)	    0.50	  Not limited 		  Moderately limited  ~low strength   (moderately limited)	    0.50 
33C2: Knox	  Not limited   		  Slightly limited  ~slope   (slightly limited)	    0.10 	  Moderately limited  ~low strength   (moderately limited)	    0.50 	  Not limited   		  Moderately limited  ~low strength   (moderately limited)	    0.50 

#### Forest Management

Map symbol and soil name	   Hand planting 		   Mechanical planti 	ng	  Use of harvesting equ   	ipment	  Mechanical site prepa   (surface)	ration	   Roads (natural surf 	ace)
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
33D2: Knox	  Not limited 		  Moderately limited  ~slope   (moderately limited)		  Moderately limited  ~low strength   (moderately limited)	0.50	  Not limited 		Limited  ~slope   (limited)  ~low strength   (moderately limited)	0.76
33F: Knox	  Slightly limited  ~slope   (slightly limited)	0.14	  Limited  ~slope   (limited) 	    0.99     	  Moderately limited  ~slope   (moderately limited)  ~low strength   (moderately limited)	  0.60    0.50	  Moderately limited  ~slope   (moderately limited) 	    0.60   	  Very limited  ~slope   (very limited)  ~low strength   (moderately limited)	1.00
33F2: Knox	  Slightly limited  ~slope   (slightly limited)	0.14	  Limited  ~slope   (limited) 	    0.99     	  Moderately limited  ~slope   (moderately limited)  ~low strength   (moderately limited)	  0.60    0.50	  Moderately limited  ~slope   (moderately limited)   	    0.60     	  Very limited  ~slope   (very limited)  ~low strength   (moderately limited)	1.00
36C2: Ladoga	  Not limited 		  Slightly limited  ~slope   (slightly limited)	    0.10 	  Moderately limited  ~low strength   (moderately limited)	    0.50 	  Not limited 	     	  Moderately limited  ~low strength   (moderately limited)	0.50
37A: Leslie	  Not limited 		  Not limited     		  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	0.50	  Slightly limited  ~seasonal wetness   (slightly limited)	    0.29   	Moderately limited   ~low strength   (moderately limited)   ~seasonal wetness   (slightly limited)	0.50

#### Forest Management

Map symbol and soil name	   Hand planting 		   Mechanical planti: 	ng	Use of harvesting equ	ipment	  Mechanical site prepa:   (surface)	ration	   Roads (natural surfa 	ace)
	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value
37B: Leslie	  Not limited 		  Not limited     	           	  Moderately limited  ~low strength  (moderately limited)  ~seasonal wetness  (slightly limited)	    0.50    0.29	  Slightly limited  ~seasonal wetness   (slightly limited)	    0.29   	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	    0.50    0.29
40: Leta	Limited  ~stickiness (surface)   (limited)	0.75	  Limited  ~stickiness (surface)   (limited)   	    0.75         	  Limited  ~stickiness (surface)   (limited)  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.75    0.50    0.20	  Limited  ~stickiness (surface)   (limited)  ~seasonal wetness   (slightly limited)	  0.75    0.20 	  Limited  ~stickiness (surface)  (limited)  ~flooding  (moderately limited)  ~low strength  (moderately limited)	  0.75    0.60    0.50
41: Levasy	  Moderately limited  ~seasonal wetness   (moderately limited)  ~stickiness (surface)   (moderately limited)	0.60	  Moderately limited  ~seasonal wetness   (moderately limited)  ~stickiness (surface)   (moderately limited)	ĺ	  Moderately limited  ~seasonal wetness   (moderately limited)  ~stickiness (surface)   (moderately limited)  ~low strength   (moderately limited)	  0.60    0.50    0.50	  Moderately limited  ~seasonal wetness   (moderately limited)  ~stickiness (surface)   (moderately limited)	    0.60    0.50   	   Moderately limited   ~seasonal wetness   (moderately limited)   ~flooding   (moderately limited)   ~stickiness (surface)   (moderately limited)	  0.60    0.60    0.50
42F: Plainfield	  Slightly limited  ~slope   (slightly limited)	0.14	  Limited  ~slope   (limited)	    0.99 	  Moderately limited  ~slope   (moderately limited)	    0.60 	  Moderately limited  ~slope   (moderately limited)	    0.60 	  Very limited  ~slope   (very limited)	1.00
43B: Macksburg	  Not limited   		  Not limited   	     	  Moderately limited  ~low strength   (moderately limited)	    0.50 	  Not limited   		  Moderately limited  ~low strength   (moderately limited)	    0.50 

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti   	ng	  Use of harvesting equ   	ipment	  Mechanical site prepa   (surface)	ration	   Roads (natural surf   	ace)
	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value
44C2: Arispe	  Not limited		  Slightly limited  ~slope   (slightly limited)	0.20	  Moderately limited  ~low strength   (moderately limited)	0.50	  Not limited		Moderately limited   ~low strength   (moderately limited)   ~slope   (slightly limited)	0.50
44D2: Arispe	  Not limited 		  Moderately limited  ~slope   (moderately limited) 	    0.47   	  Moderately limited  ~low strength   (moderately limited)	    0.50   	  Not limited   		  Limited  ~slope   (limited)  ~low strength   (moderately limited)	0.76
45C2: Mandeville	  Not limited 		  Slightly limited  ~slope   (slightly limited) 	  0.20     	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50    0.10 	  Slightly limited  ~seasonal wetness   (slightly limited) 	0.10	Moderately limited   ~low strength   (moderately limited)   ~slope   (slightly limited)   ~seasonal wetness   (slightly limited)	  0.50    0.15    0.10
45D2: Mandeville	  Not limited 		  Moderately limited  ~slope   (moderately limited) 	    0.47     	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50    0.10 	  Slightly limited  ~seasonal wetness   (slightly limited)	0.10	Limited  -slope   (limited)  -low strength   (moderately limited)  -seasonal wetness   (slightly limited)	  0.76    0.50    0.10
45F: Mandeville	  Slightly limited  ~slope   (slightly limited)	0.10	  Limited  ~slope   (limited) 	    0.87   	  Moderately limited  ~low strength   (moderately limited)  ~slope   (moderately limited)	  0.50    0.42	  Moderately limited  ~slope   (moderately limited) 	    0.42   	  Very limited  ~slope   (very limited)  ~low strength   (moderately limited)	1.00

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti 	ng	Use of harvesting equ	ipment	Mechanical site prepa   (surface)	ıration	Roads (natural surf	iace)
	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value
47B: Monona	    Not limited		  Not limited 	         	    Moderately limited  ~low strength   (moderately limited)	        0.50	  Not limited 		  Moderately limited  ~low strength   (moderately limited)	      0.50
47C2: Monona	  Not limited 		  Slightly limited  ~slope   (slightly limited)	    0.20   	  Moderately limited  ~low strength   (moderately limited)	    0.50   	Not limited		  Moderately limited  ~low strength   (moderately limited)  ~slope   (slightly limited)	  0.50    0.15
50B: Mcgirk	  Moderately limited  ~seasonal wetness   (moderately limited)	0.60	   Moderately limited   ~seasonal wetness   (moderately limited) 	    0.60   	  Moderately limited  ~seasonal wetness   (moderately limited)  ~low strength   (moderately limited)	  0.60    0.50	  Moderately limited  ~seasonal wetness   (moderately limited)	0.60	   Moderately limited   ~seasonal wetness   (moderately limited)   ~low strength   (moderately limited)	0.50
53C: Menfro	  Not limited 		Slightly limited  ~slope   (slightly limited)	    0.10 	  Moderately limited  ~low strength   (moderately limited)	    0.50 	  Not limited 		  Moderately limited  ~low strength   (moderately limited)	0.50
53C2: Menfro	  Not limited 		  Slightly limited  ~slope   (slightly limited)	    0.10 	  Moderately limited  ~low strength   (moderately limited)	    0.50 	  Not limited 		  Moderately limited  ~low strength   (moderately limited)	0.50
53D2: Menfro	  Not limited   		  Moderately limited  ~slope   (moderately limited) 	    0.47   	  Moderately limited  ~low strength   (moderately limited) 	  0.50   	  Not limited   		  Limited  ~slope   (limited)  ~low strength   (moderately limited)	0.76

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti 	ng	Use of harvesting equal	ipment	Mechanical site prepa   (surface)	ration	Roads (natural surf 	ace)
	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
53F: Menfro	  Slightly limited  ~slope   (slightly limited)	0.14	  Limited  ~slope   (limited)	0.99	  Moderately limited  ~slope   (moderately limited)  ~low strength   (moderately limited)	0.60	  Moderately limited  ~slope   (moderately limited)	0.60	  Very limited  ~slope   (very limited)  ~low strength   (moderately limited)	1.00
57: Joy	  Not limited 		  Not limited   	       	  Moderately limited  ~low strength   (moderately limited)	    0.50 	  Not limited   	       	  Moderately limited  ~low strength   (moderately limited)	0.50
60: Moniteau	Moderately limited  ~seasonal wetness   (moderately limited)	    0.60     	  Moderately limited  ~seasonal wetness   (moderately limited) 	    0.60     	  Limited  ~seasonal wetness   (limited)  ~low strength   (moderately limited)	    0.91    0.50	  Limited  ~seasonal wetness   (limited) 	    0.91     	  Limited  ~seasonal wetness  (limited)  ~flooding  (moderately limited)  ~low strength  (moderately limited)	0.50
63: Nodaway	  Not limited   		  Not limited   		  Moderately limited  ~low strength   (moderately limited)	    0.50   	  Not limited   		  Moderately limited  ~flooding   (moderately limited)  ~low strength   (moderately limited)	0.50
65: Ackmore	  Not limited   		  Not limited     	           	  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	0.50	  Slightly limited  ~seasonal wetness   (slightly limited) 	0.20	   Moderately limited   ~flooding   (moderately limited)   ~low strength   (moderately limited)   ~seasonal wetness   (slightly limited)	0.50

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti   	ng	  Use of harvesting equ   	ipment	  Mechanical site prepa   (surface)	ration	   Roads (natural surf 	ace)
	Rating class and limiting features	Value   	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value
67C2: Sampsel	   Moderately limited   ~seasonal wetness   (moderately limited)   ~stickiness (surface)   (moderately limited)	0.60	   Moderately limited   ~seasonal wetness   (moderately limited)   ~stickiness (surface)   (moderately limited)   ~slope   (slightly limited)	0.60    0.50	(moderately limited)	  0.50    0.50	Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (moderately limited)	0.76	Limited  -seasonal wetness (limited) -low strength (moderately limited) -stickiness (surface) (moderately limited)	0.50
68: Winterset	  Moderately limited  ~stickiness (surface)   (moderately limited) 	  0.50     	   Moderately limited   ~stickiness (surface)   (moderately limited)   	  0.50       	   Moderately limited   ~low strength   (moderately limited)   ~stickiness (surface)   (moderately limited)   ~seasonal wetness   (slightly limited)		Moderately limited  ~stickiness (surface) (moderately limited)  ~seasonal wetness   (slightly limited)		Moderately limited  -low strength  (moderately limited)  -stickiness (surface)  (moderately limited)  -seasonal wetness  (slightly limited)	0.50
70A: Sarpy	    Not limited	     	    Not limited 		    Not limited		    Not limited	     	    Not Limited 	
73B: Sibley	  Not limited 	     	  Not limited   	     	  Moderately limited  ~low strength   (moderately limited)	0.50	  Not limited 	       	  Moderately limited  ~low strength   (moderately limited)	0.50
73C2: Sibley	  Not limited   		  Slightly limited  ~slope   (slightly limited)	    0.20   	  Moderately limited  ~low strength   (moderately limited) 	0.50	Not limited		Moderately limited   ~low strength   (moderately limited)   ~slope   (slightly limited)	0.50

#### Forest Management

Map symbol and soil name	Hand planting		   Mechanical planti 	ng	  Use of harvesting equ 	ipment	  Mechanical site prepa   (surface)	ration	   Roads (natural surf   	ace)
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
73D2: Sibley	  Not limited		  Moderately limited  ~slope   (moderately limited)		  Moderately limited  ~low strength   (moderately limited)	0.50	Not limited		  Limited  ~slope   (limited)  ~low strength   (moderately limited)	0.76
76D2: Snead	  Moderately limited  ~stickiness (surface)   (moderately limited)		   Moderately limited   ~stickiness (surface)   (moderately limited)   ~slope   (moderately limited)	0.47	   Moderately limited   ~low strength   (moderately limited)   ~stickiness (surface)   (moderately limited)   ~seasonal wetness   (slightly limited)		Moderately limited  ~stickiness (surface)   (moderately limited)  ~seasonal wetness   (slightly limited)		Limited <pre>~slope (limited)  ~low strength (moderately limited)  ~stickiness (surface) (moderately limited)</pre>	0.50
83: Moville	  Not limited 		  Not limited     		  Moderately limited  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	0.50	Slightly limited  ~seasonal wetness   (slightly limited)	0.20	Moderately limited ~flooding (moderately limited) ~low strength (moderately limited) ~seasonal wetness (slightly limited)	0.50
86: Waldron	  Limited  ~stickiness (surface)   (limited)	    0.75       	  Limited  ~stickiness (surface)   (limited) 	    0.75       	  Limited  ~stickiness (surface)   (limited)  ~low strength   (moderately limited)  ~seasonal wetness   (slightly limited)	  0.50	Limited  ~stickiness (surface)   (limited)  ~seasonal wetness   (slightly limited)	0.75	Limited  -stickiness (surface) (limited) -flooding (moderately limited) -low strength (moderately limited)	  0.60    0.50
90B: Weller	  Not limited 		  Not limited 	   	  Moderately limited  ~low strength   (moderately limited)	    0.50	  Not limited 		  Moderately limited  ~low strength   (moderately limited)	0.50

#### Forest Management

Map symbol and soil name	Hand planting		Mechanical planting		Use of harvesting equipment		Mechanical site preparation   (surface)		Roads (natural surface)	
	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value   	Rating class and limiting features	Value	Rating class and limiting features	Value
90C2: Weller	    Not limited		  Slightly limited  ~slope   (slightly limited)	        0.20	    Moderately limited  ~low strength   (moderately limited)	        0.50	  Not limited 		   Moderately limited   ~low strength   (moderately limited)   ~slope   (slightly limited)	0.50
90D2: Weller	  Not limited		  Moderately limited  ~slope   (moderately limited)		  Moderately limited  ~low strength   (moderately limited)	    0.50   	  Not limited 		Limited  ~slope   (limited)  ~low strength   (moderately limited)	  0.76    0.50
93C2: Winfield	  Not limited		Slightly limited  ~slope   (slightly limited)	  0.20   	  Moderately limited  ~low strength   (moderately limited)	0.50	  Not limited   		Moderately limited   ~low strength   (moderately limited)   ~slope   (slightly limited)	  0.50    0.15
95: Wiota	  Not limited 	       	  Not limited 	       	  Moderately limited  ~low strength   (moderately limited)	0.50	  Not limited 		  Moderately limited  ~low strength   (moderately limited)	    0.50
96: Zook	Limited  -stickiness (surface)   (limited)  -seasonal wetness   (moderately limited)	0.60	  Limited  ~stickiness (surface)  (limited)  ~seasonal wetness  (moderately limited) 	  0.60	  Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (limited)  ~low strength   (moderately limited)	0.50	  Limited  ~seasonal wetness   (limited)  ~stickiness (surface)   (limited)	  0.91    0.75   	  Very limited  ~flooding   (very limited)  ~seasonal wetness   (limited)  ~stickiness (surface)   (limited)	  1.00    0.91    ) 0.75

#### Forest Management

Map symbol and soil name	   Hand planting 		   Mechanical planting 		  Use of harvesting equipment		  Mechanical site preparation   (surface)		Roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
99F: Lindley	Slightly limited  ~slope   (slightly limited)	0.14	  Limited  ~slope   (limited) 	    0.99   	  Moderately limited  ~slope   (moderately limited)  ~low strength   (moderately limited)	0.50	  Moderately limited  ~slope   (moderately limited) 	0.60	  Very limited  ~slope   (very limited)  ~low strength   (moderately limited)	1.00
100: Pits	  Not rated 		  Not rated		  Not rated 		Not rated		  Not rated 	
M-W: Water	    Not rated 		      Not rated 		    Not rated 	       	    Not rated		      Not rated 	
W: Water	  Not rated 		  Not rated 		  Not rated 	       	  Not rated 		  Not rated 	
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